

WHAT IS CLAIMED IS:

1. A near-field photomask made up of a light shield film and openings formed in said light shield film, said photomask being used to expose an exposure target with a near-field light generated through the openings,

wherein the openings formed in said light shield film comprise two or more parallel rows of first slit openings each having a width smaller than 100 nm, and a second slit opening having a width smaller than 100 nm and extended perpendicularly to said rows of first slit openings while interlinking at least two of said rows of first slit openings.

2. A near-field photomask according to Claim 1, wherein an exposed area of said exposure target is given by an area of said second slit opening which does not overlap with said first slit opening.

3. A near-field photomask according to Claim 1, wherein the width of said second slit opening is equal to a width of said light shield film positioned between adjacent two of said first slit openings.

4. A near-field photomask according to Claim 3,

wherein the exposed area of said exposure target has a square dot pattern.

5. A near-field photomask according to Claim 1, wherein a plurality second slit openings are arranged at a predetermined interval.

6. A near-field exposure apparatus comprising:  
a near-field photomask according to Claim 1;  
light illuminating means for illuminating a polarized light, which has an electric field component parallel to said rows of first slit openings, to said near-field photomask; and

means for positioning said near-field photomask close to said exposure target up to a distance within a near-field region.

7. A dot pattern forming method including a step of forming a dot pattern by using a near-field exposure apparatus according to Claim 6.

8. A dot pattern forming method according to Claim 7, wherein a dot of said dot pattern is a quantum dot.

9. A dot pattern forming method according to Claim 7,

wherein a dot of said dot pattern is a sub-wavelength structure.

10. A dot pattern forming method according to Claim 7, wherein a dot of said dot pattern is a localized plasmon generating structure.

11. A dot pattern forming method according to Claim 7, wherein said dot pattern has a plurality of dots formed in an array.

12. A device manufactured by a dot pattern forming method according to Claim 7.